

Misusing Statistics

Lecturer: John Guttag

“Mexican health officials suspect that the swine flu outbreak has caused more than 159 deaths and roughly 2,500 illnesses.”

CNN, April 29, 2009

How Many Die from Seasonal Flu in U.S.?

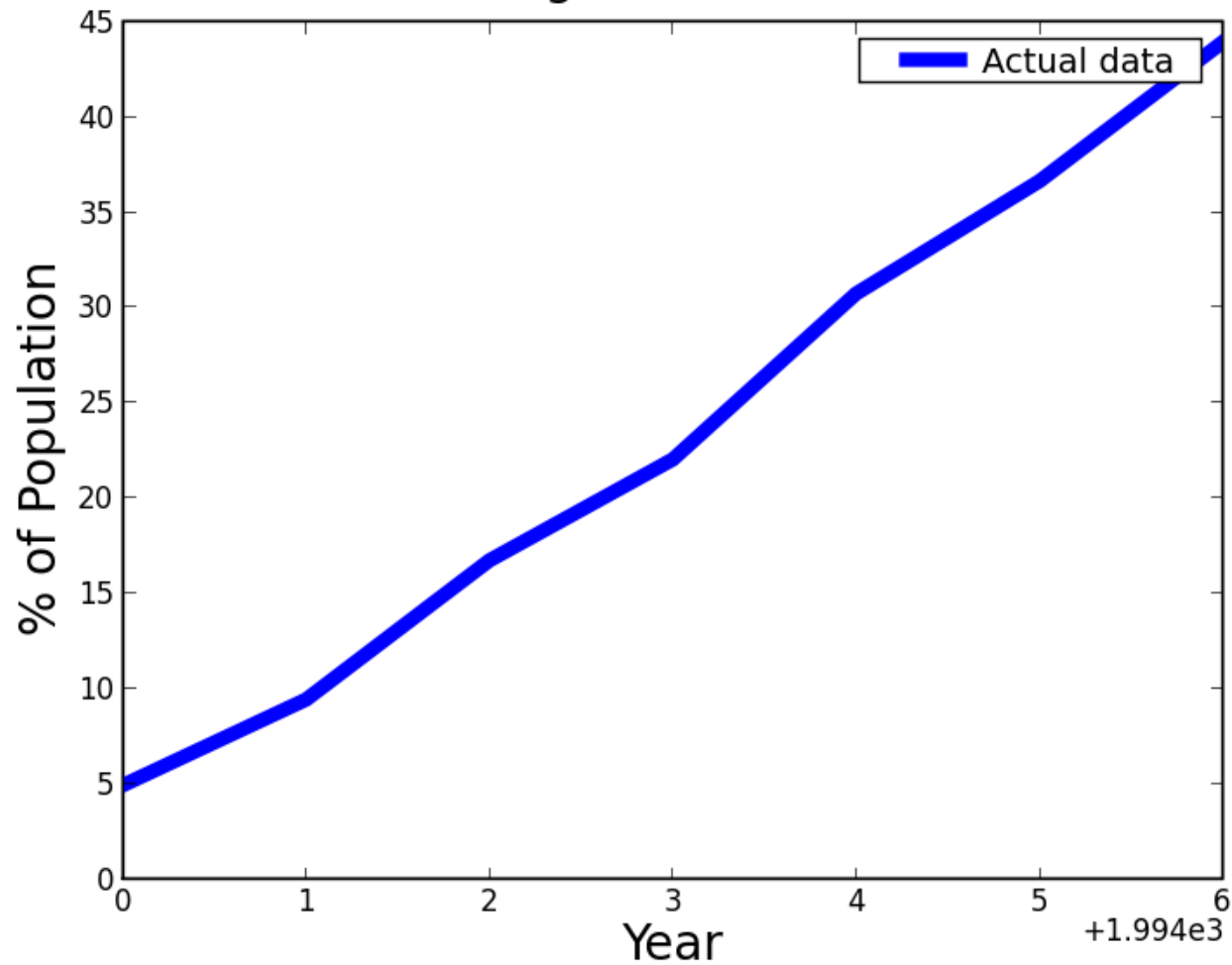


6.00x

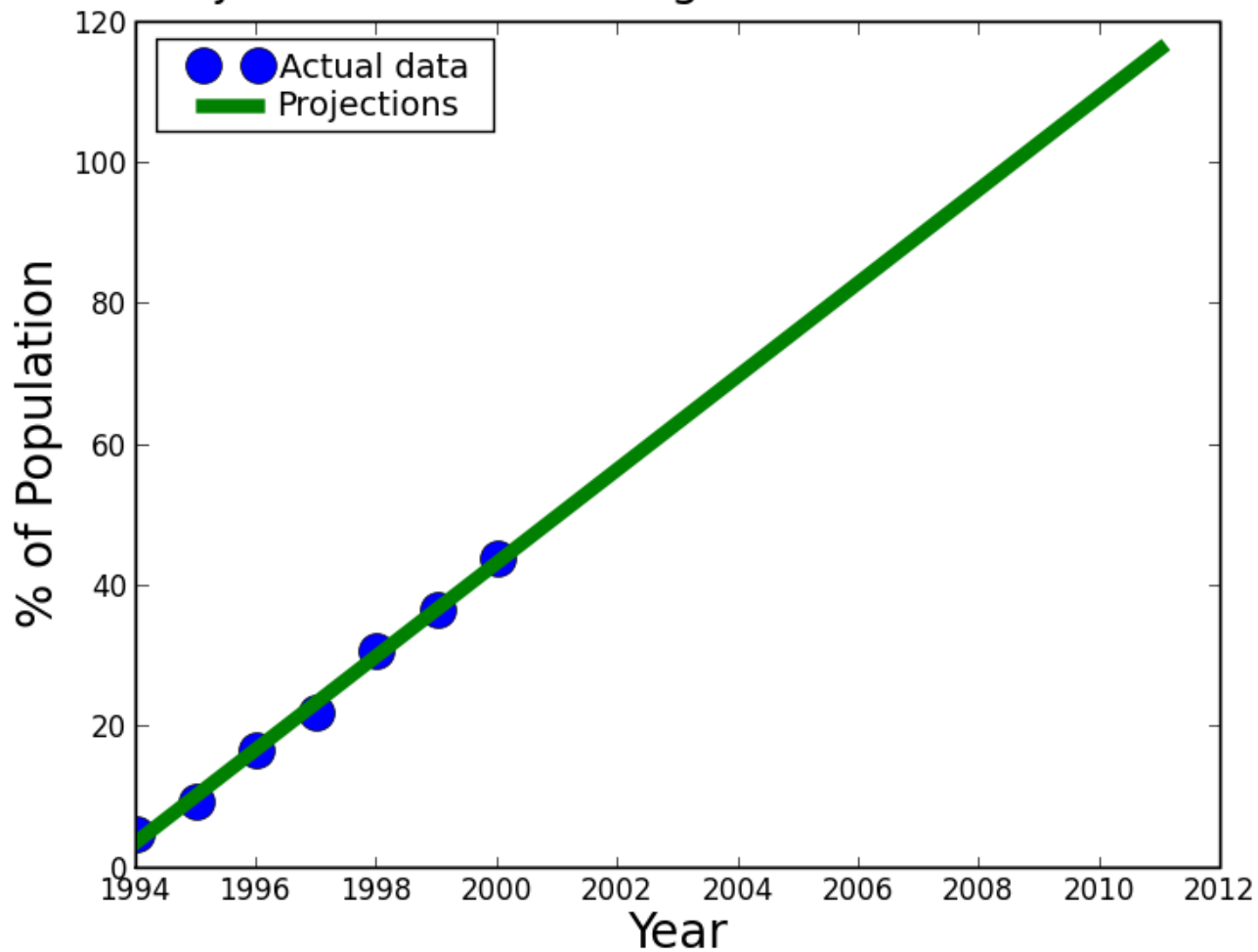


Misusing Statistics

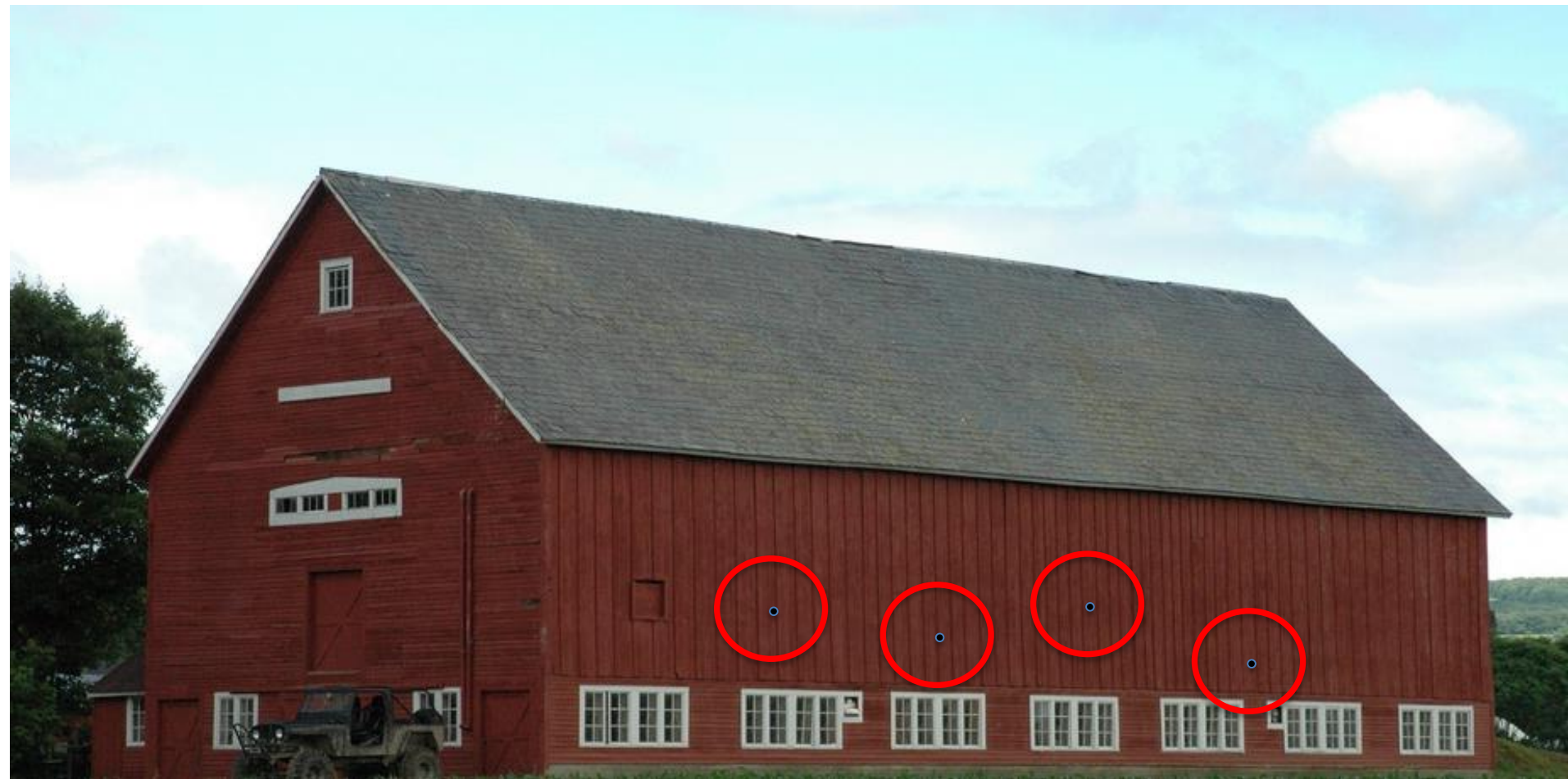
Internet Usage in the United States



Projected Internet Usage in the United States







(modified) CC-BY Image Courtesy of Putneypics

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“anorexic women are most likely to have been born in the spring or early summer... Between March and June there were 13% more anorexics born than average, and 30% more in June itself.”


```
def juneProb(numTrials):  
    june48 = 0.0  
    for trial in range(numTrials):  
        june = 0.0  
        for i in range(446):  
            if random.randint(1,12) == 6:  
                june += 1.0  
        if june >= 48:  
            june48 += 1  
    jProb = str(june48/numTrials)  
    print 'Probability of at least 48 births in June =', jProb
```



```
def anyProb(numTrials):  
    anyMonth = 0.0  
    for trial in range(numTrials):  
        months = [0.0]*13  
        for i in range(446):  
            months[random.randint(1,12)] += 1  
        if max(months) >= 48:  
            anyMonth += 1  
    aProb = str(anyMonth/numTrials)  
    print 'Probability of at least 48 births in some month =', aProb
```

